

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re patent application of:	)	
	)	Confirmation No.: 6545
LISA A. BUCKMAN	)	
	)	Examiner: Bello, Agustin
Serial No.: 10/080,944	)	
	)	Group Art Unit: 2613
Filed: February 22, 2002	)	
	)	Atty. Docket No.: 10004353-1
For: STRUCTURE AND APPARATUS	)	
FOR A VERY SHORT HAUL,	)	
FREE SPACE, AND FIBER	)	
OPTIC INTERCONNECT AND	)	
DATA LINK	)	

**REPLY BRIEF**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the Examiner's Answer filed on February 7, 2008, the appellant replies as follows:

The appellant agrees with the Examiner's Answer in that the main point of contention between the appellant and the office is the limitation of "collimating optics for collimating the optical signals emitted from each said multi-wavelength array of VCSELs into a single uniform optical signal." The office asserts that Robertson teaches this limitation and the appellant disagrees.

The examiner notes that the appellant argued that the multiple emitters transmit via the same collimated optical signal and that the "same collimated signal" was not claimed. The examiner is correct in that "the same collimated signal" is not claimed. However, this element of claim 1 recites "collimating optics for collimating the optical signals emitted from each said multi-wavelength array of VCSELs into a single uniform optical signal." Therefore, the collimated optical signals are collimated into a single uniform optical signal. It follows that this uniform optical signal has to be collimated. Otherwise, the individual collimated signals could not collimate into a single uniform optical signal as claimed.

The office contends that the overlapping signals shown in Figs. 3 and 4 of Robertson disclose a "single uniform optical signal" as claimed. Reference is made to the description of Fig. 4 of Robertson at column 4, line 55 to column 5, line 7 where the overlapping signals are diverted by the lenslets 19A-D, which states:

Thus, FIG. 4 shows the paths of the light beams when carrier unit 11 and lenslet unit 19 are misaligned translationally (upwards) by a distance  $+\Delta x$  relative to carrier unit 10 and lenslet unit 18. As a result, though most of the light leaving lenslet 18A will impinge upon lenslet 19A and be refocussed upon receiver 17A, a portion of the light leaving lenslet 18A will impinge on lenslet 19B, as indicated by reference letter X and "leak" into channel 6. However, as shown in FIG. 5, this portion X of the light beam will be refocussed at a position 22B which is offset downwards by distance  $-dw/2$  relative to the optical axis 20B of lenslet 18B. Receiver 17B is offset upwards by distance  $+dw/2$  relative to the optical axis 21B of lenslet 19B. The leakage light X is refocussed at a position 22B which is a distance  $dw$  from the center of the window of receiver 17B, as shown in detail in FIG. 5. The distance  $\Delta x$  does not affect the position of the light with respect to axis 21B--the light is focused a distance  $dw/2$  below axis 21B. Hence, receiver 17B will not receive the refocussed light portion X from emitter 16A.

As stated above, a first signal that impinges on a second signal is refocused away from the second receiver by the second lenslet. Accordingly, the first signal does not become part of the second signal as recited in claim 1. Thus, Robertson teaches that the two signals are not to be a single uniform signal as claimed in claim 1. Rather, Robertson teaches that the impinging signal is to be diverted from the other signal. Furthermore, the appellant contends that having one signal impinge on another signal does not form a “single uniform optical signal” as claimed.

The office also states that if only one emitter of Robertson transmits, then the one signal will be collimated. The office asserts that the one signal is emitted by a multi-wavelength array and that only one of the emitters needs to transmit.

The appellant contends that this interpretation of claim 1 is incorrect. Claim 1 states that the surface emitting lasers are operating at predetermined wavelengths (plural), not a singular wavelength. Therefore, more than one emitter of Robertson needs to be transmitting in order to achieve the predetermined wavelengths. Therefore, the scenario offered by the office does not correspond to the claim language of claim 1.

Respectfully submitted,  
KLAAS, LAW, O’MEARA & MALKIN, P.C.

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